

AD-A033 283

ARMY AEROMEDICAL RESEARCH LAB FORT RUCKER ALA  
HELMET MOUNTED SIGHT/VISUALLY COUPLED SYSTEMS. SELECT BIBLIOGRA--ETC(U)  
OCT 75 S H BULLOCK

F/G 19/5

UNCLASSIFIED

USAARL-SPECIAL BIB-SER-2

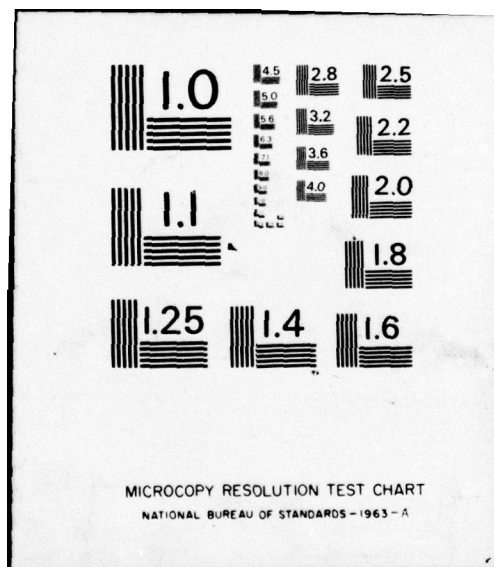
NL

| OF |  
AD  
A033283



END

DATE  
FILMED  
2-77

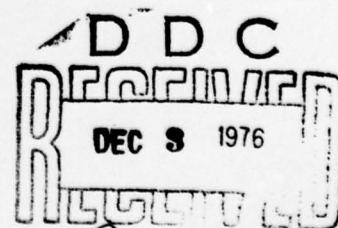


2  
na  
**LIBRARY**



ADA033283

**US ARMY ✓  
AEROMEDICAL  
RESEARCH  
LABORATORY**



**SPECIAL BIBLIOGRAPHY**  
**NO.2 ✓      OCTOBER 1975**

DISTRIBUTION STATEMENT A  
Approved for public release;  
Distribution Unlimited

6  
HELMET MOUNTED SIGHT/VISUALLY COUPLED SYSTEMS,  
SELECT BIBLIOGRAPHY.

10  
Compiled by Sybil H. Bullock

11 Oct 75

14 USAARL-Special Bib-Ser-2

12 7 p.

U. S. Army Aeromedical Research Laboratory Library  
Fort Rucker, Alabama

ACCESSION FOR	
RTIS	Write Section <input checked="" type="checkbox"/>
DDC	Dist Section <input type="checkbox"/>
UNANNOUNCED	<input type="checkbox"/>
JUSTIFICATION.....	
BY.....	
DISTRIBUTION/COMMUNITY RATE	
Dist.	AVAIL. FOR P. 10000
A	

404 578

mt

HELMET MOUNTED SIGHT/VISUALLY COUPLED SYSTEMS  
SELECT BIBLIOGRAPHY  
October 1975

- Abbott, B. A. A head-mounted night vision display system for helicopter operation. Army Electronics Command Night Vision Laboratories, Fort Belvoir, Va, Tech. Report 299-099-385.
- Arner, R. S. Some visual problems of flight. American Journal of Optometry, 34:233-240, 1957.
- Birt, Joseph A. and Furness, Thomas. Visually coupled systems. Air University Review 25:28-40, Mar-Apr 1974.
- Bizzi, E. The coordination of eye-head movements. Scientific American 231:100-106, Oct 1974.
- Chason, L. Ralph, Schwank, Jock C. H. and Hughes, Richard L. Target vigilance effects from visual obstructions imposed by helmet-mounted display hardware. AMRL TR 73-17.
- Christenson, V. R. Airborne USH telemetry package---agile test pod. Naval Weapons Center, China Lake, Calif. Report No. NWC-TP-5223, Aug 1971.
- Fehr, Eric R. Optimized optical link for helmet mounted display. Hughes Aircraft Company, Culver City, Calif. Engineering Equipment Division. AD770-307. AMRL TR73-20.
- Furness, T. A. The application of helmet-mounted displays to airborne reconnaissance and weapon delivery. USAF Aerospace Medical Research Laboratory. AMRL TR70-9.
- Hasselbring, H. H. A survey of sighting and aiming devices. NAFI-TR-1557, Jul 1970.
- Heard, J. L., Hayes, D. O., Ferrer, J. J. and Zilgavis, A. Design of an airborne helmet-mounted display. Hughes Aircraft Company, Sept. 1969.
- Hughes, R. J., Henke, A. H. Schultz, R. L., Blackburn, D. R. and Church, D. A. Helmet-mounted sight/display applications. Honeywell Report No. 12592-FRI AD870-448, vol. 1. Summary and conclusions.



- Hughes, R. J., Henke, A. H., Schultz, R. L., Blackburn, D. R., and Church, D. A. Helmet-mounted sight/display applications. Vol. III. Tracking capabilities. Honeywell Report No. 12592-FR3, AD870-972.
- Hughes, R. J., Henke, A. H., Schultz, R. L., Blackburn, D. R. and Church, D. A. Helmet-mounted sight/display applications, vol. IV Baseline HMS/D system. Honeywell Report 12592-FR4 AD870-973.
- Hughes, R. L. Sensor lockup by means of helmet-mounted sight. Honeywell Document No. 14327-TRI, Oct. 1970.
- Hughes Aircraft Corp. An optimized optical link for helmet mounted display (OOLHMD). Vol. II. Technical proposal Report No. TP70-129, Dec. 1970.
- Hughes Aircraft Corp. Lightweight helmet-mounted display (HMD) optics. Vol. II. Technical Report No. TP71-43, Mar 1971.
- Hughes, Aircraft Corp. The Hughes airborne helmet-mounted display (HMD).
- Jacobs, R. S., Triggs, T. J., and Aldrich, J. W. Helmet-mounted display/sight system study. Air Force Flight Dynamics Lab. Wright-Patterson AFB, Ohio, Technical Report AAFDL-TR-70-83, vol. 1, Aug 1970.
- Kennedy, Kenneth W. and Kroemer, K. H. Eberhard. Excursions of head, helmet and helmet attached reticle under plus G forces. AMRL TR72-127, May 1973, AD 767-201.
- Linton, P. M. Helmet mounted displays. Reg. 4011-089-71. Naval Air Warfare Center, Chinal Lake, California, Dec. 1971.
- Loper, L. R. and Stout, R. C. The relationship between optical distortion and binocular depth perception. NASA TN-D-5162, 1969.
- Nicholson, R. M. The feasibility of a helmet-mounted sight as a control device. Human Factors 8(5):417-425, 1966.
- Roscoe, S. N. The effect of eliminating binocular and peripheral monocular visual cues upon airplane pilot performance in landing. Journal of Applied Psychology, 32:649-661, 1948.
- Shontz, W. D. and Trumm, G. A. Perceptual processes and current helmet-mounted display concepts. Honeywell, Minneapolis, Minn. Research Department Life Sciences Group Technical Note TN-1 Apr 69.

Strother, D. D. and Upton, H. W. Head-mounted display/control system in V/STOL operations. Paper presented at National V/STOL Forum of the American Helicopter Society (Preprint No. 532). Washington, D.C., May 1971.

Task, Harry L. and Hornseth, John P. An evaluation of the Honeywell 7A helmet mounted display in comparison with a panel display: Target detection performance. AMRL TR 74-3 AD 775-993, Jan 1974.

Vallerie, L. L. Displays for seeing without looking. Human Factors 8:507-513, 1966.

The following reports appear in the Proceedings of the Symposium on Visually Coupled Systems Development and Application, Technical Report AMD TR 73-1, December 1972.

Biberman, L. M. Perception of displayed information.

Catanzaro, C. Operational aspects of VTAS.

Chaikin, G. and Enderwick T. Field test of air-to-ground target acquisition performance with a visually coupled system.

Chatten, J. B. Foveal hat, a head aimed TV system with foveal/peripheral image format.

Cohen, B. J., and Markoff, J. I. Minimization of binocular rivalry with a see-through helmet mounted sight and display.

Coluccio, T. L. and Mason, K. A. The viewing hood oculometer; a sighting control and display feedback system.

Dietz, F. H. Evaluation of the helmet mounted sight.

Elfason, D. D. Pilot acceptance of visually-coupled systems (VCS).

Feaster, A. V. Application of VCS.

Ferrin, F. J. F4 visual target acquisition system.

Foote, L. L., Schone, E. G. and Adamski, D. F. An optimized head coupled TV for remotely manned driving and manipulation tasks.

Furness, T. A. Overview of VCS development program at AMRL.

Grossman, J. D. A flight evaluation of pilot/helmet mounted sight visual acquisition and tracking performance.

- Harmon, G. L., Jones, D. B. and Will, H. C. Helicopter flight test evaluation data involving helmet sight acquisition and automatic optical pattern tracking.
- Haywood, W. J. A new precision electro-optical technique for measuring pilot line of sight in aircraft coordinates.
- Kenneally, W. J., Keane, W. P., and Milelli, R. J. Operational evaluation of HMD characteristics.
- Kocian, D. F. Development of a helmet-mounted visor display.
- Krautman, L. W. and Hatlelid, J. E. Simplified high accuracy guidance (SHAG).
- Kuipers, J. The SPASYN, a new transducing technique for visually coupled control systems.
- Latta, J. N. Design of holographic element systems for helmet displays.
- McCauley, D. G., Simpson, C. E., Murbach, W. J., and Holloway, H. A holographic optical element for visual head-up display application.
- McMillan, D. R. Utilization of visually coupled systems for aircraft in a digital communications environment.
- Merchant, J. and Morrisette, R. Aerospace medical research laboratory/Honeywell remote oculometer.
- Preston, T. W. Baseline VTAS for AGILE.
- Sawamura, R. T. The ultrasonic advanced helmet-mounted sight.
- Self, H. C. The construction and optics problems of helmet-mounted displays.
- Upton, H. W. and Strother, D. D. Design and flight evaluation of a head-mounted display and control system.
- Vickers, D. L. Helmet-mounted 3-D display.
- Winner, R. N. A color helmet mounted display system.
- Woodson, R. A. Specifying, aligning and testing imaging optics of helmet mounted displays.
- Zirkle, G. W., Stobie, W. H., and Curtin, J. G. Weapons airborne testing-training system (WATTS).



#### BIBLIOGRAPHY

Hughes, Richard L., Chason, L. Ralph, and Schwank, Jock C.  
Psychological considerations in the design of helmet-mounted displays and sights, overview and annotated bibliography.  
Aerospace Medical Research Laboratory, Wright-Patterson AFB, Ohio, AMRL TR 73-16, Aug 1973.

#### MISCELLANEOUS REPORTS BY TITLE

Development of a flyable acoustic optic laser beam deflection system for a head up display of the future. AD 776 653

Holographic lens for pilot's head up display AD 787 605.

An exploratory simulation study of a head-up display for general aviation light planes. N74-11837.

Simulator evaluation of display concepts for pilot monitoring and control of space shuttle approach and landing. Phase 2: manual flight control. N74-13817.

Materials for holographic optical elements. AD 771 775.

The production and evaluation of dischromated holographic lenses. AD 777 845.

Helmet mounted display tube design. AD 782 242.

A model of eye movements induced by head rotation. AD 762 818.

Simulated night visual approaches to two airports to evaluate pilot performance with and without head-up display device. N72-33024.

Survey of electronic cockpit displays, noting human factors, head-up, head-down and eyeglass display and related technology. N73-10474.

The production and evaluation of holographic lenses. AD 764 701.

Helmet-mounted display implications for Army Aviation. AD A009 507.

Royal Aircraft Establishment, Farnborough, England. Head and neck mobility of pilot's measured at the eye. RAE-TR 74158 DRIC-BR-44792. AD A008 084.

